

## Periscope.

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### α.—ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

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**MOVEMENTS OF THE BRAIN.**—The following are the conclusions deduced from a critical review of the literature of the movements of the brain by Dr. Vaillard in the *Revue Mensuelle de Médecine et de Chirurgie*, Aug. 10:

1. The movements of the brain are of two kinds: the one kind in relation with the beat of the heart, the other with the respiratory movements. There are, beside these, less rapid variations in volume, hardly perceptible, that appear to be connected with rhythmic changes in the tonicity of the small vessels.

2. Calm and easy respiration barely modifies the tracing of the variations of volume of cardiac origin. Exaggerated respiration *apparently* suppresses the pulsation of cardiac origin and produces an augmentation of volume during expiration and a diminution during inspiration.

3. Effort causes a very notable augmentation of the volume of the brain, to the condition that follows a strong inspiration.

4. Compression of the jugulars at the base of the neck causes turgescence of the brain.

5. Compression of the carotids produces an absolute diminution of the volume of the organ.

6. The vertical position causes a veritable aspiration on the brain, which sinks down much more than it would from its mere weight alone.

7. Elevation of the superior members favors the afflux of blood in the brain and indirectly produces increase of its volume.

8. Application of the Junod's boot to a leg, although causing evident disorders of cerebral anæmia, does not diminish the volume of the brain very appreciably, on account of the compensatory afflux of the cephalo-rachidian fluid.

9. The relations that may exist between the circulatory modifications of the brain and the phenomena of intellectual labor are not yet well determined.

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**MALE AND FEMALE HEADS.—THEIR MEASUREMENTS.**—Dr. J. S. Wright (*Archives of Medicine*), from a careful study of male and female heads, concludes: 1. The brain of the educated male has a comparatively greater volume in the anterior part of the cranial cavity than the brain of the educated female. 2. The brain of the uneducated male has a comparatively greater volume in the anterior part of the cranial cavity than the brain of the uneducated female. 3. The volume and form of the brain of the unedu-

Among other recent papers on the Anatomy and Physiology of the Nervous System we may mention the following:

FLINT, Is the Action of the Medulla Oblongata in Normal Respiration Reflex? *Am. Jour. Med. Sci.*, July.—SIMANOFFSKY, On the Influence of the Irritation of Sensory Nerves on the Functions and Nutrition of the Heart, *St. Petersburg. méd. Wochenschr.*, No. 26.—LANGENDORFF, On a Contralateral Reflex in the Frog and General Spinal Reflexes in Rabbits, *Centralbl. f. d. med. Wiss.*, No 28.—WILDER, The Cerebral Fissures of the Domestic Cat, *Science*, July 31.—MYERS, Nervous Force and Animal Electricity, *Va. Med. Monthly*, August.—DALTON, On the Form and Topographical Relations of the Corpus Striatum, *Brain*, July.—IRELAND, Notes on Left-handedness, *Ibid.*—WALLER, On Muscular Spasms known as Tendon-Reflex, *Ibid.*

## b.—PATHOLOGY OF THE NERVOUS SYSTEM AND MIND; AND PATHOLOGICAL ANATOMY.

POLIOMYELITIS AND NEURITIS.—A paper by E. Leyden in the *Zeitschr. f. klin. Medicin*, I., No. 3, which is very fully abstracted by S. Guttman in the *Deutsche med. Wochenschr.*, July 24, discusses very elaborately the subjects of the anterior spinal paralysis of children and adults, progressive muscular atrophy and multiple neuritis. From his investigations Leyden concludes that there are, in what is called infantile paralysis, several different kinds of anatomical lesions, and that the situation of the poliomyelitic patches at the enlargements of the cord and their etiology and development permit the inference in many cases of their peripheral origin. After a thorough analysis of the previous anatomical investigations of cases diagnosed as acute or sub-acute poliomyelitis, he recognizes two separate forms, one consisting of small circumscribed patches in the anterior grey horns, commencing in the formation of fatty granulations and ending in sclerosis, with destruction of the ganglion cells; and this is especially the condition in the essential or atrophic infantile paralysis and the corresponding affection in adults; and a second form consisting of diffusely extended atrophy of the great ganglion cells, and of the ground substance of the anterior grey cornua (more or less involving the whole length of the cord), and characterizing more especially the sub-acute type most frequently met with in adults. The true nature of this last type is yet uncertain, since from its exceedingly chronic course the anatomical lesions of its earlier periods have not yet been observed. To these two he adds still a third form, multiple peripheral neuritis, the symptoms of which may be much like those of poliomyelitis and which may be acute, sub-acute, or chronic in its course.

Leyden holds that progressive muscular atrophy may originate peripherally as well as centrally, as examinations in some cases have found the spinal cord intact. This, he claims, is the case with all the forms of atrophic paralysis, and a separation is practically impossible as the forms all pass into each other. Dr. Leyden has always admitted the occurrence of